

Listing of Claims

Claims 1-21 (Cancelled)

22. (Currently Amended) A fitting specifically adapted for use in the petroleum industry, for providing a substantially fluid-tight seal between an opening in a ~~manhole~~ chamber wall and a pipe passing through said opening, said fitting comprising:[(-)]

- (i) a tubular sleeve ~~adapted to pass through the opening in the chamber wall and further~~ adapted to allow the pipe to pass through the sleeve;
- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange;
- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

wherein the tubular sleeve extends from ~~both sides~~ only one side of the flange ~~such that, in use, the~~ said fitting being adapted to be can be positioned and welded in one position on the inside one side of the chamber wall ~~and in a reversed, alternative~~

~~position, can be positioned on the outside of the chamber wall, the , said fitting being rigid and in the said first surface of the flange being a rigid, flat, planar surface.~~

23. (Previously Presented) A fitting according to Claim 22, in which the first surface comprises a fusible material which, when heated via the energy transfer means, at least partially melts, causing the fitting and the wall to be fused together.

24. (Cancelled)

25. (Previously Presented) A fitting according to Claim 22, in which the fitting is adapted for use with a wall which is of a material which is not suitable for being attached to the fitting by electrofusion, the first surface of the fitting incorporating an adhesive of a type which is activated by heat, wherein the heating of the first surface by the energy transfer means activates the adhesive and thereby bonds the fitting to the wall.

26. (Previously Presented) A fitting according to Claim 25, in which the adhesive is selected from a thermoplastic, thermoset, cross-linking or pressure sensitive adhesive.

27. (Previously Presented) A fitting according to Claim 22, in which the energy transfer means comprises a heating wire which is embedded within the first surface.

28. (Previously Presented) A fitting according to Claim 22, in which the sleeve is of a substantially circular cross-section, and the flange is radial.

29. (Previously Presented) A fitting according to Claim 22, in which the fitting includes terminals for connecting the energy transfer means to a current supply.

30. (Currently Amended) A fitting according to Claim 22, wherein the fitting further comprises a sealing member or boot adapted to form a fluid tight seal between the sleeve and the pipe and which is secured to the tubular sleeve by mounting over ~~one~~ of the tubular ~~extensions~~ extension of the tubular sleeve.

31. (Currently Amended) A fitting according to Claim 30, in which one of the group comprising the sealing member and boot is resilient, and the tubular sleeve is adapted to receive one of the group comprising the sealing member and boot on ~~either~~ of the tubular ~~extensions~~ extension of the tubular sleeve.

32. (Currently Amended) A method specifically adapted for use in the petroleum industry, of forming a seal between an opening in a ~~manhole~~ chamber wall and a pipe passing through said opening, the method comprising the steps of:

(a) applying a fitting to the pipe, said fitting comprising:

- (i) a tubular sleeve ~~adapted to pass through the opening in the chamber wall and further~~ adapted to allow the pipe to pass through the sleeve;
- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange;
- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

wherein the tubular sleeve extends from ~~both sides~~ only one side of the flange, ~~such that, in use, the~~ said fitting being adapted to ~~can be positioned in one position on the inside and welded on one side of the chamber wall and in a reversed, alternative position, can be positioned on the outside of the chamber wall, and in that the~~ said fitting is rigid and ~~in that the~~ said first surface of the flange ~~is~~ being a rigid, flat, planar surface;

(b) applying energy to the energy transfer means and thereby heating the first surface to cause the fitting to seal to the chamber wall in a fluid tight manner;

(c) applying a sealing member to form a fluid tight seal between the sleeve and the pipe.

33. (Cancelled)

34. (Previously Presented) A method according to Claim 32, in which the materials constituting the wall and the first surface are such that their surfaces are fused together by a process of electrofusion.

35. (Previously Presented) A method according to Claim 32, in which the method also includes providing an adhesive which is activated by said heating to cause the fitting to be bonded to the wall.

36. (Currently Amended) A method according to Claim ~~[[23]]~~ 32, in which an adhesive is incorporated into the first surface on the flange.

37. (Currently Amended) A method according to Claim ~~[[32]]~~ 58, in which the manhole chamber wall is for a subterranean fuel tank.

38. (Currently Amended) A subterranean fuel tank having a manhole chamber with a manhole chamber wall and having fuel conveying pipework in fluid communication with the fuel tank and extending into the chamber through an opening in the chamber wall, through the chamber and out of the chamber so that fuel is not released into the manhole chamber, there being provided in the chamber wall a fitting for providing a substantially fluid-tight seal between the opening in the chamber wall and a pipe of the pipework passing through said opening to seal against water from leaking into the manhole chamber to seek to maintain the manhole chamber substantially free of water, said fitting comprising:

- (i) a tubular sleeve ~~adapted to pass through the opening in the chamber wall and further~~ adapted to allow the pipe to pass through the sleeve;
- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange;
- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

wherein the tubular sleeve extending from only one side ~~both sides~~ of the flange, said fitting being adapted to be positioned and welded on one side of the chamber wall, said the fitting being rigid and the first surface of the flange being a rigid, flat, planar surface.

39. (Currently Amended) A fuel pump having a sump chamber with a sump chamber wall and having fuel conveying pipework in fluid communication with the pump and extending into the chamber through an opening in the chamber wall, through the chamber and out of the chamber, there being provided in the chamber wall a fitting for providing a substantially fluid-tight seal between the opening in the chamber wall and a pipe of the pipework passing through said opening, said fitting comprising:

- (i) a tubular sleeve ~~adapted to pass through the opening in the chamber wall and further~~ adapted to allow the pipe to pass through the sleeve;
- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange; and
- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first

surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

the tubular sleeve extending from only one side ~~both sides~~ of the flange, said fitting being adapted to be positioned and welded on one side of the chamber wall, the said fitting being rigid and the first surface of the flange being a rigid, flat, planar surface.

40. (Canceled)

41. (Canceled)

42. (Canceled)

43. (Canceled)

44. (Canceled)

45. (Canceled)

46. (Canceled)

47. (Canceled)

48. (Canceled)

49. (Canceled)

50. (Canceled)

51. (Canceled)

52. (Canceled)

53. (Canceled)

54. (Previously Presented) A fitting specifically adapted for use in the petroleum industry, for providing a substantially fluid-tight seal between an opening in a chamber wall and a pipe passing through said opening, said fitting comprising:

- (i) a tubular sleeve adapted to pass through the opening in the chamber wall and further adapted to allow the pipe to pass through the sleeve;
- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange;

- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

wherein the tubular sleeve extends from both sides of the flange such that, in use, the fitting can be positioned in one position on the inside of the chamber wall and in a reversed, alternative position, can be positioned on the outside of the chamber wall, and wherein said fitting is rigid and said first surface of said flange is a rigid, flat, planar surface.

55. (Currently Amended) A fitting specifically adapted for use in the petroleum industry, for providing a substantially fluid-tight seal between an opening in a chamber wall and a pipe passing through said opening, said fitting comprising:

- (i) a tubular sleeve ~~adapted to pass through the opening in the chamber wall and further~~ adapted to allow the pipe to pass through the sleeve;
- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange;

- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

wherein the tubular sleeve extends from only one side ~~both sides~~ of the flange, said fitting being adapted to be positioned and welded on one side ~~such that, in use, the fitting can be positioned in one position on the inside of the chamber wall and in a reversed, alternative position, can be positioned on the outside of the chamber wall,~~ the fitting being rigid and in the first surface of the flange being a rigid, flat, planar surface, wherein the fitting is adapted to have at least one rubber boot seal mounted to it.

56. (New) A fitting according to Claim 22, wherein said fitting additionally comprises a manhole chamber wall.

57. (New) A fitting according to Claim 22, wherein said fitting additionally comprises a sump chamber wall.

58. (New) A method according to Claim 32, wherein said fitting additionally comprises a manhole chamber wall.

59. (New) A method according to Claim 32, wherein said fitting additionally comprises a sump chamber wall.

60. (New) A method specifically adapted for use in the petroleum industry, of forming a seal between an opening in a chamber wall and a pipe passing through said opening, the method comprising the steps of:

- (a) applying a fitting to the pipe, said fitting comprising:
 - (i) a tubular sleeve adapted to pass through the opening in the chamber wall and further adapted to allow the pipe to pass through the sleeve;
 - (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange;
 - (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

wherein the tubular sleeve extends from both sides of the flange such that, in use, the fitting can be positioned in one position on the inside of the chamber wall and in a reversed, alternative position, can be positioned on the outside of the chamber wall, and in that the fitting is rigid and in that said first surface of the flange is a rigid, flat, planar surface;

(b) applying energy to the energy transfer means and thereby heating the first surface to cause the fitting to seal to the chamber wall in a fluid tight manner;

(c) applying a sealing member to form a fluid tight seal between the sleeve and the pipe.

61. (New) A subterranean fuel tank having a manhole chamber with a manhole chamber wall and having fuel conveying pipework in fluid communication with the fuel tank and extending into the chamber through an opening in the chamber wall, through the chamber and out of the chamber so that fuel is not released into the manhole chamber, there being provided in the chamber wall a fitting for providing a substantially fluid-tight seal between the opening in the chamber wall and a pipe of the pipework passing through said opening to seal against water from leaking into the manhole chamber to seek to maintain the manhole chamber substantially free of water, said fitting comprising:

(i) a tubular sleeve adapted to pass through the opening in the chamber wall and further adapted to allow the pipe to pass through the sleeve;

- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange;
- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

the tubular sleeve extending from both sides of the flange, the fitting being rigid and the first surface of the flange being a rigid, flat, planar surface.

62. (New) A fuel pump having a sump chamber with a sump chamber wall and having fuel conveying pipework in fluid communication with the pump and extending into the chamber through an opening in the chamber wall, through the chamber and out of the chamber, there being provided in the chamber wall a fitting for providing a substantially fluid-tight seal between the opening in the chamber wall and a pipe of the pipework passing through said opening, said fitting comprising:

- (i) a tubular sleeve adapted to pass through the opening in the chamber wall and further adapted to allow the pipe to pass through the sleeve;

- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange; and
- (iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

the tubular sleeve extending from both sides of the flange, the fitting being rigid and the first surface of the flange being a rigid, flat, planar surface.

63. (New) A fitting specifically adapted for use in the petroleum industry, for providing a substantially fluid-tight seal between an opening in a chamber wall and a pipe passing through said opening, said fitting comprising:

- (i) a tubular sleeve adapted to pass through the opening in the chamber wall and further adapted to allow the pipe to pass through the sleeve;
- (ii) a flange, extending radially outwardly from the sleeve, a first surface of the flange being configured to contact the chamber wall around substantially the whole circumference of the opening and over substantially the whole first surface of the flange;

(iii) an energy transfer means comprising conduction means for conducting an electric current, said conduction means in use being heated by the current, to cause said heating of the first surface, said energy transfer means incorporated in the flange and situated adjacent to the first surface of the flange, said energy transfer means being adapted to heat the first surface of the flange in order to form a substantially fluid tight seal between the wall and the flange;

wherein the tubular sleeve extends from both sides of the flange such that, in use, the fitting can be positioned in one position on the inside of the chamber wall and in a reversed, alternative position, can be positioned on the outside of the chamber wall, the fitting being rigid and in the first surface of the flange being a rigid, flat, planar surface, wherein the fitting is adapted to have at least one rubber boot seal mounted to it.